

REMARKS

By Office Action mailed May 18, 2005, pending claims 1-11 stand rejected, reconsideration of which is respectfully requested in view of the above amendments and following remarks. Claim 1 has been amended. Claims 1-11 are now pending.

Rejections Under 35 U.S.C. § 103(a)

Claim 1

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kustermann (U.S. Patent No. 6,248,174) in view of Seymour (U.S. Patent No. 5,110,213). More specifically, the Examiner is of the opinion that Kustermann discloses a method for determining the degree of loading or coating medium on a material web comprising (i) measuring the transmittance of light through the material web when in an unloaded state, (ii) measuring the transmittance of light through the coated material web, and (iii) comparing the difference in transmittance to determine the degree of loading. Although the Examiner recognizes that Kustermann does not teach that the material web may be a carbon substrate, the Examiner relies on Seymour to cure this deficiency. In this regard, the Examiner alleges that Seymour teaches that it is known in the art to provide a method for measuring the concentration of a material in a carbon sheet or substrate. In view of the foregoing, the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the method of Kustermann with the carbon substrate of Seymour.

Applicants respectfully disagree with the Examiner's application of Kustermann and Seymour and submit that such references are from such diverse arts (namely, paper coating and tobacco products) that a person of ordinary skill in the claimed art (namely, fuel cell technology) would not look to those arts to solve the problem treated by the claimed invention. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446 (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436 (Fed. Cir. 1986), *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992) ("A reference is reasonably pertinent if, even though it may be in a

different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem."), and MPEP § 2141.01(a). Applicants submit that neither Kustermann, nor Seymour, satisfy either of such requirements.

Clearly, Kustermann and Seymour fail to satisfy the first requirement, which requires that a cited reference be in the field of applicant's endeavor. In this regard, Applicants note that Kustermann relates to paper coating products and Seymour relates to tobacco products. Pending claim 1, on the other hand, relates to fuel cell technology and is directed to a method for measuring the loading of a waterproofing agent (such as polytetrafluoroethylene (PTFE)) within a carbon substrate for use in an electrochemical fuel cell (such as for use in the manufacture of a gas diffusion electrode). To further clarify and highlight these differences, Applicants have amended claim 1 as set forth above. Applicants submit that no new matter has been added by way of these amendments.

With respect to the second part of the inquiry, which requires that a cited reference be reasonably pertinent to the particular problem with which the inventor was concerned, Applicants submit that one of ordinary skill in the art of fuel cell technology would not have looked to the methods of Kustermann and Seymour when considering a solution to the problem addressed by the claimed method. In this regard, Applicants note that the claimed method of the present invention addresses the need in the art of fuel cell technology for improved non-destructive methods for measuring the loading of a waterproofing agent within a carbon substrate; in other words, the need for a non-destructive method for measuring the impregnation of a waterproofing agent throughout (as opposed to just a surface coating on) a dark or black substrate through which transmission only occurs by multiple reflections and/or scattering.

Kustermann and Seymour, on the other hand, are directed to, respectively, (i) an apparatus for controlling the amount of a surface coating applied to a transparent material web, such as paper or cardboard (*i.e.*, cellulose fibers), using a paint curtain or paint veil type applicator, and (ii) a method for measuring the concentration of a material in a sample, such as the concentration of carbon in a carbon-containing sheet to be used in the production of tobacco products, by converting a two-dimensional optical image of the sample into a two-dimensional

gray scale array of points and comparing the array to that of a reference sample. Applicants submit that one of ordinary skill in the art of fuel cell technology would not have looked to such unrelated methods when developing an improved method for measuring the degree of loading of a waterproofing agent within a gas diffusion electrode.

Accordingly, in view of the foregoing, Applicants submit that the cited references fail to establish a *prima facie* case of obviousness against claim 1, and request that this ground of rejection be withdrawn.

Claims 2-11

Claims 2-5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kustermann in view of Seymour as applied to claim 1 above, and further in view of the “Background of the Invention” section of the present application as set forth on pages 3-4 of the Office Action. Claims 6-8 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kustermann in view of Seymour as applied to claim 1 above, and further in view of Bonsel et al. (U.S. Patent No. 6,197,147) as set forth on pages 5-6 of the Office Action. Claims 9-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kustermann in view of Seymour as applied to claim 1 above, and further in view of Bauer (U.S. Patent No. 4,737,651) as set forth on page 6 of the Office Action. As noted, these rejections are based upon the Examiner’s conclusion that the method of claim 1 is unpatentable over Kustermann in view of Seymour. However, as set forth above, Applicants disagree with the Examiner’s application of Kustermann and Seymour to independent claim 1. Accordingly, Applicants respectfully request that these rejections also be withdrawn.

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In view of the above amendments and remarks, allowance of claims 1-11 is respectfully requested. A good faith effort has been made to place this application in condition for allowance. However, should any further issue require attention prior to allowance, the Examiner is requested to contact the undersigned at (206) 622-4900 to resolve the same. Furthermore, the Commissioner is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

Hong Cao et al.

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